Annual

WATER QUALITY REPORT

Reporting Year 2013

Presented By

Town of Estes Park

PWS ID#: CO0135257

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

There When You Need Us

The Town of Estes Park is proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2013. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available to assist you should you ever have any questions or concerns about your water.

Where Your Water Comes From

The Town of Estes Park treats water from two seperate sources. As part of the Colorado-Big Thompson Project, our Marys Lake plant receives source water from the upper Colorado River after it has been stored in Grand Lake and transported 13.1 miles to the East Slope via the Alva B. Adams tunnel into Marys Lake. This plant can obtain water directly from the tunnel or the Lake. Our second source, Glacier Creek, is a tributary to the Big Thompson River which begins at an elevation of 11,300 feet in Rocky Mountain National Park. It is treated at the Glacier Creek plant, located on the eastern boundary of the Park.

We are fortunate in that our source water is virtually uncontaminated by introduced toxins such as industrial waste, petroleum by-products, or agricultural run-off. Our treatment process is primarily an effort to eliminate naturally occurring substances and to adjust the chemical characteristics of the water to allow the treatment steps to take place.

Important Health Information

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants or who have AIDS or other immune system disorders, some elderly, and infants can be particularly at risk of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (U.S. EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and microbiological contaminants, call the U.S. EPA Safe Drinking Water Hotline at (800) 426-4791.

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: **Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife; **Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; **Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems; **Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Community Participation and Contact Information

The Town of Estes Park encourages public interest and participation in matters concerning our community's water system. The Public Safety, Utilities, and Public Works Committee meets on the second Thursday of every month. The public is always welcome. Specific questions or information relating to water quality can be directed at any time to the Estes Park Water Department by calling Jeff Boles, Water Superintendent, at (970) 577-3608, or Diana Beehler, Laboratory/Water Quality Supervisor, at (970) 577-3624. You can also visit the Web site for the Town of Estes Park at www.estes.org.

Unregulated Contaminant Monitoring

Under the Safe Drinking Water Act, the EPA is required once every 5 years to issue a new list of up to 30 unregulated contaminants that public water systems must monitor for as part of a study to determine their prevalence and whether they should be added to the list of regulated contaminants. In 2013, all water systems serving greater than 10,000 people were required to test for 21 previously unmonitored contaminants, and some representative systems were required to test for all 30. Of the 21 substances we were required to monitor for, 6 were detected. These contaminants are listed in the Unregulated Substances data table in this report. For questions about these substances or to learn more about them, please contact us or visit the American Water Works Web site at http://www.drinktap.org/home/water-information/water-quality/ucmr3.aspx.

Source Water Assessment

In 2005, the Colorado State Department of Health and Environment finalized an assessment of all drinking water sources in the state to determine the susceptibility of each public water system to potential sources of contamination and establish a uniform susceptibility rating of high, moderately high, moderate, moderately low, or low for every watershed and water provider.

The state assessment reported an overall susceptibility rating of moderately low for the Glacier Creek Facility and moderate for Marys Lake. The dispersed and discrete sources of potential contaminants listed in the report include: commercial/industrial/transportation and low-density residential land use; urban recreational grasses, pastures, and hay; one hazardous waste generator; above-ground, below-ground, and leaking storage tank sites; mine sites; deciduous, evergreen, and mixed forests; septic systems; roads; chemical inventory/storage sites; a solid waste site; oil/gas wells; and permitted wastewater discharge sites.

The assessment further rates water sources based on their physical setting vulnerability. A vulnerable physical setting generally means the water source will be more susceptible to potential contamination. Glacier Creek received a low physical vulnerability rating while Marys Lake scored moderately low.

The Source Water Assessment provides a screening-level evaluation of the likelihood that a potential contamination problem could occur rather than an indication that a problem has or will occur. It provides useful information to communities concerning potential contaminant sources and to public water systems for evaluation of the need for improvements to treatment capabilities. The complete Source Water Assessment Report is available through the Water Department. You can request a copy by calling Jeff Boles, Water Superintendent, at (970) 577-3608 or by visiting www.colorado.gov/cdphedir/wq/swap/larimer/135257estesparktownofsw.pdf

Installing the temporary line at Brodie and Fish Creek Road after the Sept 2013 flood

How Hard Is the Water in Estes Park?

This is a question we frequently get at the Water Department, often when residents get new dishwashers and the manual recommends using a water softener or varying the amount of detergent based on the number of grains of hardness of the water.

Hard water is water that has a high mineral content, consisting mainly of calcium and magnesium. Hard water is formed when water passes over or percolates through rock and soil that contains these minerals. Although hard water is generally not harmful to one's health, it can cause scale to build up in kettles, water heaters, and appliances and is usually indicated by a lack of suds formation and a "slimy" feeling when trying to rinse soap off in the shower.

The hardness of water is referred to by three types of measurements: grains per gallon, milligrams per liter (mg/L), or parts per million (ppm). Situated high in the Rocky Mountains, Estes Park source water mainly travels over granite, rather than over mineral-bearing rock such as limestone. As a result, our water is considered "soft." The tables below are provided as a reference:

Water Hardness Scale		
Grains per Gallon	mg/L or ppm	Classification
Less than 1.0	Less than 17.1	Soft
1.0 –3.5	17.1 – 60	Slightly hard
3.5 – 7.0	60 – 120	Moderately hard
7.0 – 10.5	120 – 180	Hard
Over 10.5	Over 180	Very hard

Estes Park Water Hardness Scale		
Grains per Gallon	mg/L or ppm	Classification
Less than 1 to 1.0	7 – 17.1	Soft

The Environmental Protection Agency (EPA) establishes standards for drinking water that fall into two categories: Primary Standards and Secondary Standards. Primary Standards are based on health considerations while Secondary Standards are based on aesthetics such as taste, odor, color, or corrosivity. There is no Primary or Secondary standard for water hardness. In fact, the National Research Council states that hard drinking water generally contributes a small amount toward human dietary needs for total calcium and magnesium (National Research Council, Drinking Water and Health, Volume 3, National Academy Press, Washington, D.C., 1980). On average, the calcium levels found in the water delivered by the Town of Estes Park would contribute only about 2% of the Daily Recommended Allowance of calcium for an adult.

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show the most recent test results for contaminants that were detected in the water. The Amount Detected column lists the average of all the samples tested for that substance throughout the year, while the range shows the highest and lowest values.

The State requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2011	15	0	0.45	0.2–0.7	No	Erosion of natural deposits
Barium (ppm)	2013	2	2	0.005	ND–0.01	No	Erosion of natural deposits
Chromium[1] (ppb)	2013	100	100	<4	NA	No	Erosion of natural deposits
Combined Radium (pCi/L)	2011	5	0	0.1	0.1–0.1	No	Erosion of natural deposits
Fluoride (ppm)	2013	4	4	0.1	0.1–0.1	No	Erosion of natural deposits
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2013	60	NA	21.5	10.1–39.1	No	By-product of drinking water disinfection
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2013	60	NA	14.6	10.1–19.0	No	By-product of drinking water disinfection
Hexachlorocyclopentadiene (ppb)	2012	50	50	0.02	ND–0.08	No	Pesticide runoff
Mercury [inorganic] (ppb)	2013	2	2	0.06	ND–0.11	No	Erosion of natural deposits; Runoff from landfills; Runoff from cropland
Nitrate (ppm)	2013	10	10	0.07	ND–0.14	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Picloram (ppb)	2012	500	500	0.03	ND–0.13	No	Herbicide runoff
TTHMs [Total Trihalomethanes]–Stage 1 (ppb)	2013	80	NA	34.6	10.4–63.8	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2013	80	NA	23.8	14.2–33.4	No	By-product of drinking water disinfection
Total Organic Carbon (removal ratio)	2013	TT	NA	1.53	1.33–1.78	No	Naturally present in the environment
Turbidity[2] (NTU)	2013	TT	NA	0.24	0.02–0.24	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2013	TT=95% of samples <0.3 NTU	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2013	1.3	1.3	0.07	0/21	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2013	15	0	2.5	0/21	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Chlorate (ppb)	2013	89.8	ND–340	By-product of drinking water disinfection
Chromium (ppb)	2013	0.02	ND–0.27	Naturally present in the environment
Chromium, Hexavalent (ppb)	2013	0.02	ND–0.46	Naturally present in the environment
Molybdenum (ppb)	2013	0.1	ND–1.2	Naturally present in the environment
Strontium (ppb)	2013	20.0	8.4–45	Naturally present in the environment
Vanadium (ppb)	2013	0.02	ND–0.2	Naturally present in the environment

[1] Chromium was not detected under regular monitoring by approved laboratory methods. Chromium was also tested for under UCMR3 with methods designed for lower detection limits. These results are entered in the Unregulated Substances section.

[2] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

removal ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.